

a current conduction structure over the device section, between the bonding pad layer and the substrate for connecting the bonding pad layer and the substrate electrically, wherein the current conduction structure includes:

a plurality of conductive metallic layers, wherein each conductive metallic layer is at a different height level from the substrate; and

a plurality of conductive plugs for linking neighboring conductive metallic layers and the conductive metallic layers with the bonding pad layer and the substrate;

a mechanical support structure connecting with the non-device section of the substrate, between the bonding pad layer and the substrate, wherein the mechanical support structure includes:

a plurality of support metallic layers, wherein each support metallic layer is at a different height level from the substrate; and

a plurality of support plugs for linking up neighboring support metallic layers and the support metallic layers with the bonding pad layer and the substrate; and

an insulation layer between the bonding pad layer, the current conduction structure, the mechanical support structure and the substrate for isolating the current conduction structure from the mechanical support structure.

---

---

8. (Thrice amended) A bonding pad structure, comprising:

a substrate having at least a device section and a non-device section;

a bonding pad layer above the substrate;

a current conduction structure over the device section, between the bonding pad layer and the substrate for connecting the bonding pad layer and the substrate electrically, wherein the current conduction structure includes:

a plurality of conductive metallic layer, wherein each conductive metallic layer is at a different height level from the substrate and one of the conductive metallic layers is in direct contact with the substrate; and

a plurality of conductive plugs for linking neighboring conductive metallic layers and linking one of the conductive metallic layers with the bonding pad layer;

a mechanical support structure connecting with the non-device section of the substrate, between the bonding pad layer and the substrate, wherein the mechanical support structure includes:

a plurality of support metallic layers, wherein each support metallic layer is at a different height level from the substrate and one of the support metallic layers is in direct contact with the substrate; and

a plurality of support plugs for linking neighboring support metallic layers and linking one of the support metallic layers with the bonding pad layer; and

an insulation layer between the bonding pad layer, the current conduction structure, the mechanical support structure and the substrate for isolating the current conduction structure from the mechanical support structure.

---